

To what conclusion then are we to come? It is, that all the phenomena of insect life are referable to instinct, which is held to be synonymous with vitality,—“instinctive and vital acts being but different manifestations of life, executed in accordance with the pre-established harmony between the creature and the external world.”

I do not now propose to examine the physiological doctrines propounded in this book; I only contend that the facts of insect life do not bear out the theory. For in insects we see organs analogous to the organs of the senses of the higher animals, and perceive actions performed, which, if proceeding from the higher animals, we should at once acknowledge as conclusive proof of sensation; and I do not think that we are warranted in assuming that such creatures as insects are destitute of sensation, because we cannot trace a complete identity with the higher animals in the structure and functions of their organs or their nervous system; nor in disputing the possession of a faculty (such as hearing) when we see its manifestation, because we do not know the organ by which it accomplished its purpose.

XLVIII. *On two new Sub-Genera of Australasian Chrysomelidæ, allied to Cryptocephalus.* By W. W. SAUNDERS, Esq. F.L.S.—(continued from p. 270.)

[Read 5th April, 1847.]

CHLOROPLISMA, W. W. S. Χλωρος, σπλισμα.

Head vertical, immersed in the thorax up to the eyes, with the parts of the mouth but little projecting. *Eyes* reniform, with a deep sinus, in front of which the antennæ are inserted. *Antennæ* (Pl. XV. fig. 6a) nearly filiform, about as long as the body, 11-jointed; first joint robust, pyriform, second orbicular, third, fourth and fifth slender, the fourth the shortest and about half the length of the fifth, the remaining joints somewhat more robust and shorter than the fifth joint, gradually decreasing in length towards the apex, terminal joint ovate pointed. *Thorax* trapeziform, convex on the upper surface, with the posterior angles slightly

rounded. *Scutellum* moderate, subquadrate, narrowed and elevated posteriorly. *Elytra* somewhat broader than the thorax, elongate, being in length once and a half the breadth, slightly rounded at the apex and well covering the abdomen. *Legs* somewhat long and slender. *Tarsi* 4-jointed, third joint broad and deeply bifid.

This subgenus approaches to *Idiocephala*, W. W. S., differing chiefly in the relative proportions of the second, third and fourth joints of the antennæ, and in the more elongate and less cylindrical shape of the insect.

Chloroplisma viridis, Hope MSS. (Pl. XV. fig. 6.)

Entirely of a rich bright metallic shining green, excepting the underside of the first joint, the whole of the second, third and fourth, and the underside of the fifth joints of the antennæ, where the colour is rufous, and the apices of the tibiæ and the tarsi, which are dark piceous. The whole of the upper surface, except the scutellum, is deeply and widely punctured, conjoined with slightly elevated rugosities, giving it a rough and uneven appearance. Scutellum smooth and very polished. Abdomen covered with adpressed whitish hairs.

Length $\frac{1\frac{5}{10}}{100}$ of an inch.

From New South Wales.

This insect I have only met with in the rich collection of the Rev. F. W. Hope.

LACHNABOTHRA, W. W. S. Λαχνη, βοθρος.

Head vertical, immersed in the thorax up to the eyes, with the parts of the mouth little prominent. *Eyes* elliptical, with a sinus on the anterior margin. *Antennæ* (Pl. XV. fig. 5a) about half the length of the body, nearly filiform, placed wide apart near the sinus of the eyes, 11-jointed; first joint robust, pyriform, second orbicular, third to seventh nearly of equal length, fifth the longest, all more slender and longer than the four terminal joints; apical joint ovate pointed. *Thorax* trapeziform, nearly twice as broad as long, very convex above, somewhat produced on the hinder margin, and the upper surface covered with small irregular hollows or pits, clothed with downy pubescence. *Scutellum* large, subquadrate, somewhat narrowed and much elevated behind (Pl. XV. fig. 5b). *Elytra* rather broader than thorax, somewhat longer than broad, rounded at the apex. *Abdomen* (fig. 5d) large, the

fifth joint having a deep rounded excavation in the centre near the anus on the underside. *Legs* short, robust. *Tarsi* 4-jointed; third joint broad and deeply bifid (fig. 5c).

The short, robust, broadly ovate shape, joined with the remarkably elevated scutellum and singularly sculptured thorax, distinguish this subgenus from all its allies that I am acquainted with. It would appear in some respects to approach *Onchosoma*, a subgenus I have already described in the Entomological Society's Transactions, but it is evidently distinct and a very remarkable form.

Lachnabothra Hopei, W. W. S. (Pl. XV. fig. 5.)

Dull chesnut brown. Antennæ and parts of the mouth yellow brown. Eyes black. Head rugose, covered with irregularly laid adpressed yellow white hairs. Thorax with about eighteen excavations or pits on the upper surface, densely clothed with soft down-like whitish hairs, which radiate from the centres of the excavations, giving the whole a peculiar silky appearance. Scutellum with an elevated longitudinal ridge along the centre, clothed with adpressed whitish hairs, except at the apex. Elytra rugose, with elongate rounded elevations and deep impressions, sparingly covered with yellowish-white short hairs. Abdomen underneath punctured and sparingly clothed with yellowish-white adpressed hairs. Legs rufous brown, with the tarsi paler.

Length $\frac{2.3}{100}$ inch., breadth $\frac{1.5}{100}$ inch.

From New South Wales.

In the Cabinet of the Rev. F. W. Hope, after whom I have named the species.